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C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.56.ba RHIC Zone 4z1-- RF -- Sweep Checklist

Text Pages 2 through 4

C-A-OPM Procedures in which this Attachment is used.
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4.56		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
_____	_____	_____	_____
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Revision No. 00

Approved: _____
Collider-Accelerator Department Chairman Date

P. Ingrassia

C-A-OPM-ATT 4.56.ba (Y)

RHIC Zone 4z1 -- RF -- Sweep Checklist

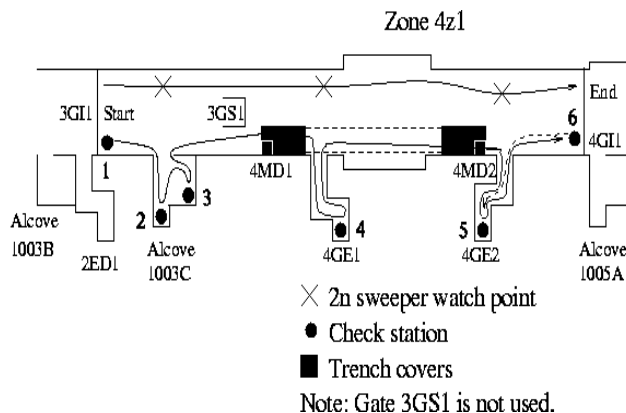
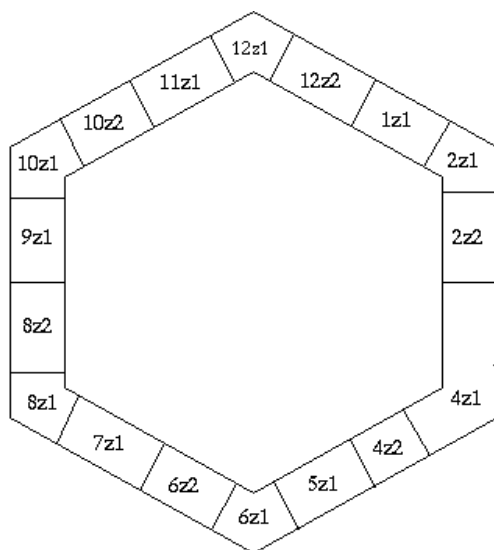
Team leader (TL) _____ Sweeper#2 (S2) _____

Time: _____ Date: _____

Warning:
Rf Group members are permitted to perform this sweep for "stand alone operation" of the RHIC Rf system

Prerequisites

- Two persons to perform the sweep,
- At least one sweeper not restricted from working at heights over five feet.
- RHIC Zone 4z1 -- RF -- Sweep Checklist (three pages)
- Required Tools: at least one flashlight,
- Chains and **APPROVED** padlocks (two each) for 4MD1 and 4MD2 trench gates.
- Two padlocks for Exhaust Fan Access Doors (may be in place)
- Walkie-talkies
- All Doors closed THEN 4z1 set to Controlled Access via PASS pushbutton panel at R4ACT7 in bldg 1004A.
- Following keys are moved from Rf key tree in MCR (bldg 911A) to PASS panel R4ACT7 in bldg 1004A:
 S/R011 (sweep key 2 each), CA010 (controlled access key 3 each), EB016 (transfer key 1 each)
- EB016 Transfer key is captured in PASS panel R4ACT7 in bldg 1004A
- Keys: Sweep Reset key S/R011 (Team Leader), Controlled Access key CA010 (Sweeper#2), padlock key (RG184)
- RF Critical Devices are all safely off.



Note:

References to positions in the tunnel are made using the RHIC magnets. The identity of the local magnet can be determined by looking up at the "lower" cable tray and reading the magnet name on a blue (B) or yellow (Y) label. For example, the convention used is: I05Q17 (Inside, Q17) or O-05Q17 (Outside, Q17). References are for inside locations and are visible only by the Team Leader

CONTINUED ON REVERSE SIDE

Check

- ___1 Sweep team enters zone 4z1 from gate 4GE2.
- ___2 TL opens 4GE2 gate by turning the CA010 key clockwise, in the Controlled Access key-switch while operator in 1004A presses 4GE2 release button simultaneously (R4ACT7 panel).

Note

4MD1, and 4MD2 (trench) Gates must be reset before the 4z1 sweep may begin. IF both gates are padlocked THEN the trench need not be padlocked or searched. **IF 4MD1 and 4MD2 are reset THEN go to step 7.**

- ___3 TL closes, chains, and padlocks the 4MD1 trench gate and resets the 4MD1 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD1 panel, and verifies yellow RESET lamp is lighted.
- ___4 Sweep team goes to 4MD2.
- ___5 Sweeper trained to enter Class I confined space goes down the ladder, walks down the tunnel to the ladder at 4MD1, sweeps back to 4MD2 and climbs back up the ladder, closes and padlocks the trench gate.
- ___6 TL closes, chains, and padlocks the 4MD2 gate, then resets the 4MD2 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD2 panel, and verifies yellow RESET lamp is lighted.
- ___7 S2 crosses under the accelerators and goes CCW to the outer 3GI1 gate while TL goes to the inner 3GI1 gate (Pass through the non-operational 3GS1 gate).
- ___8 TL resets 3GI1 by turning the S/R011 key in the RESET keyswitch at 3GI1-I
- ___9 TL observes RESET lamp light.
- ___10 TL STARTS SWEEP by turning the S/R011 key CW in the SWEEP key-switch on 3GI1-I (3CS1).
- ___11 TL observes AREA SECURED lamp blink once.
- ___12 Sweep team sweeps Clockwise (CW) around RHIC.
- ___13 TL stops to check the Exhaust Fan Vent Barrier at I03Q17
- ___14 Sweep team sweeps Clockwise (CW) around RHIC.
- ___15 S2 stands static watch at the electrical services alcove.
- ___16 TL enters the alcove and goes to the ladder at 3EL1.
- ___17 IF there is no mirror to verify no one is on the landing at the top of the ladder, THEN TL must climb the ladder to verify no one is on the landing and to check that 3EL1 is closed.
- ___18 TL resets gate 3EL1 using the S/R011 key in the Reset keyswitch at the bottom of the ladder.
- ___19 IF 3EL1 will not reset THEN TL climbs the ladder, closes 3EL1, then repeats step 18.
- ___20 TL observes RESET lamp lights after RESET.
- ___21 TL sets second check station (3CS2) by turning S/R011 key in the SWEEP keyswitch.
- ___22 TL observes AREA SECURED lamp blink once.
- ___23 TL goes to the far corner of the alcove to 3CS3.
- ___24 TL sets third check station (3CS3) by turning S/R011 key in the SWEEP keyswitch.
- ___25 TL observes AREA SECURED lamp blink once.
- ___26 TL checks inside EVERY rack and then sweeps out the alcove and joins S2.
- ___27 TL checks fan vent barrier is in place in vent above S2's head and overhead barrier is in place.
- ___28 Sweep team sweeps Clockwise (CW) around RHIC.
- ___29 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I03DU7.
- ___30 Sweep Team sweeps Clockwise (CW) around RHIC.
- ___31 Sweep Team sweeps through the non-operational gates at 3GS1.
- ___32 Sweep Team checks behind and above electrical service panels at I-O3D5 including the overhead barrier.
- ___33 Sweep team sweeps Clockwise (CW) around RHIC.
- ___34 TL confirms padlock in place on Exhaust Fan Access Door (4XEF1) near I03Q3.
- ___35 S2 crosses under accelerators to stand static watch "inside" between O-03D0 and 3-DX
- ___36 TL walks down 4GE1 labyrinth.

CONTINUED ON NEXT PAGE

- ___37 TL resets 4GE1 by turning the S/R011 key in the RESET keyswitch on the 4GE1-I box.
- ___38 Observe the yellow RESET lamp is lighted.
- ___39 TL sets fourth check station (4XCS2) by turning S/R011 key in the SWEEP keyswitch.

- ___40 TL observes AREA SECURED lamp blink once.
- ___41 TL sweeps up the labyrinth and joins S2.
- ___42 S2 crosses under the accelerators to the "outside" of the tunnel.
- ___43 Sweep Team sweeps Clockwise around RHIC to the Vapor Barrier.
- ___44 S2 joins TL and both sweep through and close the vapor barrier door.
- ___45 TL goes down the stairs and stands static watch at a position where the area under the blocks supporting the "accelerators" can be seen.
- ___46 S2 crosses under the "accelerators" to the far side of the hall, climbs over the red pipe "fence" and searches under the raised floors using the flashlight.
- ___47 Sweep Team sweeps CW around the RHIC.
- ___48 S2 confirms padlock is in place on Exhaust Fan Access Door at IC7B
- ___49 S2 stands static watch opposite 4GE2 labyrinth.
- ___50 TL walks to 4GE2 gate.
- ___51 TL sets fifth check station (4XCS3) by turning S/R011 key in the SWEEP keyswitch.
- ___52 TL observes AREA SECURED lamp blink once.
- ___53 TL sweeps up labyrinth and joins S2
- ___54 Sweep Team sweeps CW around the RHIC
- ___55 Sweep Team checks behind and above the electrical panels at I4Q5D5 including the overhead barrier.
- ___56 Sweep Team sweeps CW around the RHIC
- ___57 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I04D8.
- ___58 Sweep Team sweeps Clockwise (CW) around RHIC to 4GI1 gates.
- ___59 TL resets 4GI1 by turning the S/R011 key in the RESET keyswitch on the 4GI1-I box.
- ___60 Observe the yellow RESET lamp is lighted.
- ___61 TL ends the sweep by setting the sixth check station (4XCS4) by turning S/R011 key in the SWEEP keyswitch.
- ___62 TL observes AREA SECURED lamp light amber.
- ___63 Sweep Team walks back to 4GE2.
- ___64 TL contacts Rf control room for simultaneous release for gate 4GE2.
- ___65 Sweep Team sweeps out 4z1 through 4GE2 door.
- ___66 TL resets 4GE2 gate by turning the S/R011 key in the RESET keyswitch.
- ___67 TL verifies area secured and gate reset lamps are lit.

Note:

IF the AREA SECURED, and GATE RESET lamps are not lit THEN contact Rf Control Room to verify sweep is good and gate(s) are reset.

- ___68 TL contacts Rf control room and confirms that gates are reset and 4z1 zone indicates sweep is good (lights on PASS panel at R4ACT7). **IF gate reset and good sweep cannot be confirmed then a re-sweep will be required.**
- ___69 After returning to Rf Control Room and verifying that all information is filled out completely, TL files the checklist in Rf Sweep Log binder maintained by the Rf group leader.